

Computer News 80

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EDITORIAL COMMENTS

Looking back now over the past 6 months of our publication, many things have happened which only reinforces our desire to continue to serve those TRS-80 Users, who want the kind of simple, written in plain English, beginner, as well as the advanced user, information and problem solving that we hope to provide.

It was in late April and Early May of 1983 that the mail box held Tandy's announcement of the Model 4 computer. So this month the Model 4 is only five years old, and has grown into a senior citizen with only two offspring, called Model 4P, and Model 4D. There does not seem to be any more offspring forthcoming, and the Granddaddy of them all Mod I, is still around and going strong.

We were looking at a Tandy/Radio Shack ad ca. Jan. 1980 that read "TRS-80 is More Than a Microcomputer. TRS-80 is Radio Shacks's growing family of cost-effective computers, peripherals and software-supported by service before, during and after the sale. In scarcely two years, over 100,000 TRS-80x have gone to work for businesses, educators, professionals, and folks desiring to combine their own ingenuity with a personal computing system.

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The \$499 TRS-80 4K starter system pictured can be expanded to a 40K RAM, 4 disk system with printer - or anywhere in between- to handle your needs.

New TRS-80 Model II Systems start at \$3450 - offering features of small computers by IBM and others at 33% to 66% savings. Radio Shack has what it takes to be your computer company, today and in the future. We're making the commitment now - in facilities, research, and product development - to make sure TRS-80 remains your best small-computer value!"

And so goes the advertising pitch at that time. Now Tandy is still in there pitching in the computer game. It must come as a surprise to them that the bush league team won't quit, or at least sit quietly on the bench. There are still some home-runs in those Z80 players yet!

In another vain we would like to make a point about our publication. Until and unless the subscriber base grows much, much larger than it is -and it is growing faster than we had ever hoped- we will not have one single person who is a full time staff member, all the people who have been involved in getting this publication off the ground have full time regular jobs, and have been concerned enough to contribute to the creation of CN80, giving up their free time to write articles, answer letters, and see that the subscription orders are filled. We do hope that we will soon have a full time staff member, especially a full time technically experienced staff member, who can field your questions and letters faster than we are able to do now, but with your support and willingness to help solve the problems that others are having we will win the game.



This does not mean that we do not intend to answer every single question and letter, it is just going to take time.

Now that the nice weather is here and outside activities, yard chores, or just fun weekends are here with it, I am sure that you are not going to be as interested in spending as much of your time in front of a computer, but we don't intend to let you down hot weather or cold, nice or foul!

We look forward to and need your contributions, too.

Also, due to the late arrival of some of the disk diagnostic program information, the promised review of disk diagnostic programs will be in our next issue, along with a review of the GRAFYX Solution board, ProDraw software, and Draw Manual. If you have any comments and/or experience with the board and program drop us a line so we can incorporate your experience in our review. The best reviews are written by users, and not reviewers!

CHIPS AND WHO LEFT THE GATE OPEN

We told you in our last issue that we ordered the upgrade chips to bring our remaining Model 4 units up to 128 K of memory. These were purchased for \$25.00 per set, plus \$9.00 for the PAL chips required when upgrading the NON-Gate Array computers.

Being somewhat dumb on these matters and really confused by the sales order taker who wants to know if we need the Pal chip or not. We need to know if we have GATE A R R A Y O R N O N - G A T E A R R A Y C O M P U T E R S to upgrade.

[NON-GATE array computers require the PAL chip, all the GATE ARRAY machines do not require the PAL chip]

The question is, how do we tell without opening the computer and even then, if we did open the computer a non hacker couldn't tell anyway.

We called Tandy Hardware support in Fort Worth. After some checking -because the fellow we got said the Model 4 was before his time, but that there was someone there

that knew the answer- he soon came back with the instructions, "If the serial number has an A after it is a gate array, if there is no A after the serial number then it is a non-gate array.". He could not tell me if we required the pal chip for the non-gate or gate array, and suggested we call the local service manager, which we did.

The local Tandy service and repair center manager was very helpful, and we can not tell you who he is or in what city the repair station is in, because past experience has taught us that there are some good service people and then there are just --? But this service center manager is the only one within 900 miles of us who has been kind enough to answer our questions in the past. He did remind us that the information is from Tandy engineering and really isn't supposed to be given out to the public. I just wish that our equipment was sent to his shop instead of the one that is assigned to our area. Oh well, our local computer surgeon can do most operations anyway, that is, when he has the time away from his regular work.

The Tandy service manager informed us that he did not think that you needed the PAL chip on any machine that already had 64K of memory. It was only needed for the machines that had 32K going to 64K. Wrong! Nice guy and all but he didn't know what the story was, either.

Since the Model 4D is the latest product out the A after the serial number won't be there, they are gate array computers to start with.

So the Model 4 is the only one where the A after the serial number counts. The OLDER Model 4's without the A after the serial number are NON-gate array machines. Ok so far.

The next information came from the order taker at Aerocomp. He said "If the printer cable comes out from under the floppies, ie. the right side of the computer when you are seated in front of the screen, then it is a NON-GATE array. If you are seated in front in of the computer and the printer cable comes out from under the screen, on the left side, it is a GATE-ARRAY.". Fine this checked out.

We have also read that if the RS-232 port comes out the bottom it is a non-gate array, and if the RS-232 port comes out the back it is a gate array. The answer to that is yes and no. Some do and some don't.

Gary Rambo, our computer surgeon, tells us that when you have the machine open to the mother board, that the non-gate array will have a jumper block, that looks like a chip in it where the PAL chip goes and the gate array machines do not even have a chip socket in that location.

Why all this, well you need to know all this if you plan to order chips to upgrade your computer memory to 128K RAM, and you also need to know which type of machine you have if you are going to order a add-on board like the GRAFYX Solution Board. The reason being that the add-on socket on your computer board is positioned differently on a non-gate array mother board, and a gate array mother board, and the new add-on board will not physically fit in the computer unless it is matched to the non-gate array or gate array board that is in the computer.

The pal chip was \$9.00 as I mentioned and my phone calls added up to much more than that, I am sure. But I really wanted to get this gate open or closed once and for all. I even ordered the wrong board from GRAFYX Solution because I originally got confused about the computer that I wanted to use the board on. I then had to send the board back with apologies and ask them to ship us the other version, which they did without any flack. (Our review of the GRAFYX Solution board should be ready in time for our next issue).

When I ordered the chips for three machines, so that all our Model 4's in the office would be matched. This was before I made all the phone calls to get it straight. I said to the order taker, I am not sure how many are Non-gate array and how many are gate array computers, and I don't think I should hold you up while I try to figure it out. So just send me three sets of memory chips with the PAL chips. If I don't need the PAL chips I will just have them left over. In this case we did have all three PAL's left over.

Now that we know what gate is open and what gate is closed, I got three PAL chips in the corral. Two are going to Gary for the work of installing them, and one is going to a subscriber in Holland who tells us that they are not available over there.

Let's go on to discuss why you need to upgrade to 128K, and why you do not need to.

There has been a lot written about the need to have your computer upgraded to 128K of memory. And some of you have felt the intimidation of your fellow computer friends who let you know if you only had a 64K machine, you really were not quite up to snuff. Don't worry about it. There is no reason to upgrade your computer if you have programs that keep you in business and these programs do not require 128K to operate.

Now we know that we are going to hear from everyone who thinks that we don't know all the benefits that come from having 128K, such as being able to write longer memory based programs, using memdisk, and being able to run the programs like Scripsit Pro, which requires 128K. Or be able to create longer and bigger spreadsheets with VisiCalc. The point is that there are many of you out there who have programs such as disk Scripsit, pfs:file and others that just have no need for an expanded memory. You should not feel that you have to expand the memory, just because you don't really know if you should or not.

One of the biggest disappointments was when we first expanded our first computer and found out that the expanded memory really didn't do anything for us except add a dummy disk drive to the system via memdisk. And for us, at that time, memdisk had very little application. In those days it cost a lot more than the Tandy charge of \$79.00 to upgrade your computer, or the \$34.00 to buy the chips (with PAL); \$24.00 without our old PAL. If your business or home application is doing a great job for you and you don't plan on changing in the future, then don't worry about the need to upgrade to larger memory, just happily keep on computing. Our personal feeling is still that if you have all the memory you need to use the programs that you are now

operating, it is more important to go to double sided disk drives or to a hard drive for extra data storage capacity, before being concerned about the machine memory.

BUT—If you want to be able to get the full benefit of all that the Model 4, 4P and 4D's will give you, then you should up grade to 128K. You may not even need it now but in the future you may want to get that program that will only work on 128K. Programmers in BASIC and others have their reasons for needing large memory, which we will not go into at this time.

There are two ways to upgrade your system, first is to take it Radio Shack and have them up grade it or you can buy the chips and do it yourself. Caution - If you are not experienced in working with electronic equipment - don't attempt to do the installation yourself. Get someone who is experienced in electronics. Just the simple opening of the can with the mother board in it will be a little touchy if you are not experienced in handling electronic components. Even for the experienced the project didn't turn out to be that simple.

Remember Gary Rambo, our local computer surgeon, was operating on our three computers, one Model 4 gate array, and two Model 4D's gate array. What we observed was that some of the screws on the mother board had glue covering them, and the instructions that came with the chips, which were rather complete, did not cover the installation for the Model 4D's.

What Gary figured out is that there is no jumper wire on the back of the mother board out of site to be concerned with and the following are his instructions for installing the chips in a Model 4D.

[When adding the additional 64K RAM on the TRS-80 Model 4D with gate array board revision C the following is done:

1. Remove top with CRT
2. Remove shield covering CPU
3. Install RAM as the first 64K
4. Move JP-13 shunt from top two pins to the bottom two pins. JP-13 is located between U-33 and below C-39.
5. Reassemble

(There is no jumper wire to be removed, there is a slide shunt to be moved.)]

Rick at Aerocomp says that because there are so many versions of the Model 4D mother boards that we could have just plugged in the memory chips and checked to see if it worked, in the majority of cases they will work without any further malfunctions. Otherwise follow the instructions for installation of the RAM chips that come with the chips (from Aerocomp), they are quite complete with the one exception concerning the 4D's.

Their instructions for upgrading the TRS-80 Model 4 from 16K to 64K RAM (item #2 is to remove capacitors at C66, 88, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94 and 96 by clipping the legs with a small pair of diagonal cutters.

According to the Radio Shack service manual only 88, 72, 76, 80, 84, 88, 92 and 96 capacitors need to be removed.

When installing the chips in the newer Model 4 Gate Array, (that's the one with the A after the serial number and originally had two single sided disk drives) there is some soldering of a jumper wire to be done.

When installing the chips in the older Model 4 Non-gate array, there was no soldering of wires, just the removal of a shunt block.

All in all it is a very simple operation, but does take some time even for the person used to working with electronic components, and who has upgraded several computers in the past, and it is not recommended for the non-hacker to attempt the first time, with out some experienced hands nearby for guidance.

NEWS ITEMS

J & M Systems Ltd. has a new address other than the one we reported. It is: 15100-A Central SE., Albuquerque, NM 87123, phone 505-292-4182

On our follow up phone calls to J & M they seemed almost reluctant to discuss their products for the Model 4. However, they did

send us three sheets of paper, with prices for their Memory Minder disk diagnostic program (\$89 for their double sided Model III/IV disks), not much to make a review of. They also sent a note on their disk controller board for the Model III, phone for prices.

Tandy moves out and up, with their new Tandy 5000, starting at \$4,999 and \$6,499 with 40Mb hard drive. This unit features a 20Mhz. 80386 processor, 82385 memory cache controller with 32Kb of static ram.

Another new product in the works that Tandy has announced is the TANDY THOR™ - CD. Tandy has developed the technology to read - write Compact Disks. Up to now once a CD was written to it could not be changed and only read. Tandy says that about 500 Megabytes can be stored on the disk, and should be in production in 18 to 24 months, and sell for under \$500. With "500Mb... You could store the names and phone numbers of every person in the United State on just one THOR-CD!".

(We look forward to connecting one to our Mod 4, maybe we could have all the names of our subscribers on one side and the latest pop tunes on the other.)

PFS-Report Cat. #26-1517 and in the RS 1988 for \$39.95 has been discontinued according to the National Mail Order Service. (As we reported many of the software products for the Model 4 will be dropped by Tandy as soon as current supplies are exhausted, even though they are listed in the current catalog).

Mr. Ray Crank of Webster Groves, MO sent us a collection of great cassette based programs and other out of date programs and manuals for our archives, along with a complete set of Wayne Green's Encyclopedias, plus many other items. We wish to publicly thank Ray for his thoughtfulness. We know that having a reference library on tap will be a great aid in problem solving for TRS-80 users in the future.

We also acquired a complete set of DeskMate Cat. #26-1608 and an never opened TRSDos Version 6 Disk Operating System and Basic Interpreter manual with our purchase of our last Model 4D, this is a duplicate of items that we already have, so if there is any one interested (at half-price) let us know.

PD REVIEWS by David Goblen

I want to share with you some of the programs that are available in the world of Public Domain and Shareware software.

This month I have two disks to review. I have authored one disk, and have also written one of the programs on the other.

—> MODSCRIP <—

If you like using Disk Scripsit, you'll LOVE MODSCRIP. It packs Scripsit with so much power that you may not at first believe it. In many respects, it is more powerful than SuperSCRIPSIT.

Modscrip is designed for Disk Scripsit Version 1.0 for the Model I. It will operate with full support on the Model I, Model III and Model 4 (including the 4P and 4D, and IN the Model 4 mode) after Modscrip is run. Also, all Scripsit files that were created by the original programs -- Model I, Model III, and Model 4 versions -- are upward compatible with the new format given by Modscrip. It also contains some special feature options: you can select an optional Line Feed after Carriage Return for the Printer (as is needed on some non-Radio Shack printers), select if you wish the cursor to blink or not, an optional Simplified Keyboard, where the first letter of the command is defined as the control command.

Modscrip provides you with some of the most useful, powerful, and capable modifications EVER offered by anyone. Modscrip allows you to perform virtually all of the editing and printing capabilities that you have ever wished or dreamed that Scripsit would do, to include superscripting, subscripting, boldface, underlining, double underlining, selecting different printer densities, output your printer's ENTIRE

printable and CONTROL character set, slash zeros, and pause the printer. A major and unique printer feature of Modscrip is its ability to print only a specific page or pages in a multi-page document. This is done by using the Special Commands P,P or P,S,P. When you are prompted for the next page, the Command Line will display "Press ENTER to print Page Num. X", where X is the page number 1-65535. Press ENTER to print the page, or press BREAK to skip printing of that particular page. Additionally, all printing fonts allowed by your printer are selectable, special control codes are recognized, as well as Printer Pause. And all of the above is even supported in Justified Text in all non-Proportional Space modes. Lastly, both parallel and serial printer support is provided for all of these capabilities, and non-standard printers can easily be accommodated.

The extent of Modscrip's power is not confined to the printer output alone, but in its text editing capabilities as well. You can now Delete, Unmark, Exchange and FIND marked Blocks of text within your file without having to position your cursor to any particular point within your text. You can even Tab between the beginning characters of individual words in a forward or reverse direction, set the cursor onto a specific line within the document, scroll the video screen page 13 lines at a time up or down (21 for the Model 4 version), and delete a line up to and including a comma. Several different Hyphenation blocks can now be hyphenated without having to Unmark each block before defining another. Even further, you can perform whole-text hyphenation WITHOUT defining a hyphenation block around the text at all. The CONTROL key is now redefined to the CLEAR key for easier access, the SHIFT-CLEAR combination is now required to perform the old CLEAR function. The Tab key has been redefined to the CONTROL-T key. On the Model I and III the cursor can be 'Homed' to the upper-left corner of the video via CONTROL-H (this command calls up a 15-screen HELP menu on the Model 4), The current Date will be displayed by simply entering ?D on the Special Command Line, command line messages are displayed in lower case, computer interrupts are enabled, exit from

Scriptit directly to DOS is provided, the Command Line has been moved up to the TOP of the Video, the Tab line is enhanced, High Memory is now recognized, a Ghost Cursor is provided within the Tab Line, showing you EXACTLY where you are on the text line, NEW and OLD file prompts are displayed during disk file saves, and lower case FORMAT LINE Commands are accepted. Another enhancement is its ability to AUTOMATICALLY load a text file when entering Scriptit. Also, you can now COUNT the number of WORDS in your text file. If you accidentally re-boot or exit, you can recover your lost text in an instant.

On the Model I and III, the Cap-Lock function is moved to a more convenient SHIFT-ENTER sequence. On the Model 4, the CAPS key is used. On all versions, a Cap-Lock indicator has been added. Now when the program is in the Cap-Lock mode, the letter 'C' is displayed at all times in the upper-right corner of the screen, telling you that the capitol mode is active. On the Model 4, a directory listing of a disk can be called up within Scriptit by using the Special Command Qx, where 'x' is the drive number. Other enhanced features provided for the Model 4 version is the user's ability to 'preview' the printed data right on the video screen, use 9 user-defined keys to print repetitious information, a MOVE BLOCK command that will move a block from a location, deleting it from that position, and inserting its data at a specified location, the ability to display additional special characters, and the ability to have 9 user-defined keys for repeated text data.

Best of all, Modscrip DOES NOT take away one byte of Text area from SCRIPSIT! In fact, on the Model 4 version an additional 4.5K is added to the text buffer! All this is done without any bothersome 'outside' disk modules as some packages, such as FLEXTXT do. Finally, any spelling or grammar checker that will work with your regular Scriptit files will work with those created with the MODSCRIP modified version without any special considerations or modifications.

—> UTILITY4 <—

The UTILITY4 disk actually contains 5 programs for use on the Model 4: UTILITY4, TSK, MOVE, RAMTEST and FIXIII. These /CMD files all have associated /DOC files which document each of the programs.

I authored the UTILITY4 program, and it is a disk zap program packed with a lot of features. It will read any Model I/III/4 disk (except CP/M). Although it may have trouble on protected disks (where non-standard sector and track names are used) in the most part it will operate wonderfully. It allows you to zap disks directory, or files, or memory. It also allows you to copy sectors or data on sectors, encode passwords or HASH codes, and zero disk sectors. The documentation is very detailed, and is full of examples.

TSK was written by Bryan McKay and Bruce Travers, of Scarborough, Ontario, Canada. It is another full-featured disk zapper, including many features not included with my own program. It will also encode and decode passwords, allow you to remove all passwords, change disk attributes, change file attributes, configure system parameters, and even clear a file.

MOVE was written by George Deluca of Burlington, Ontario, Canada. It is a short utility that allows you to copy a file from one disk to another, and delete it from the source disk, in one move.

RAMTEST and FIXIII were both written by James E. Howard. RAMTEST is a quick RAM test utility. It will check the memory of a model 4 computer from 2800H in the system RAM through the top of the alternate RAM if it is installed. The format from Dos Ready is: "RAMTEST n" where n = a relative number of times to test each location in RAM. Use 1 for a quick test. The default is 256 (which can also be obtained by typing a 0). This test was devised to check out 128k updates to the computer after installation, but can be used anytime.

FIXIII is a program to help convert Model III compressed BASIC programs to a format suitable for converting into Model 4 BASIC. The program operates in the Model III mode and reads in only compressed (tokenized)

programs and generates only ASCII files. The program eliminates most extra spaces in program lines but adds essential spaces (i.e. around keywords). It also converts the exponential token to the caret symbol. Tab()'s are left alone while Print@ statements that contain numbers are converted. The effect is to utilized the top left 64 columns of the screen.

If you would like to obtain either the MODSCRIP disk or the UTILITY4 disk, send a disk mailer (home-made is fine) with a blank, formatted disk, return postage, a return address label, and \$3 for copying and handling. Also include a note specifying which disk you want. I can accept all double-density disk formats, such as NEWDOS80, TRSDOS 1.3, LDOS, LS-DOS 6, DOSPLUS and MULTIDOS. If you want both, include 2 disks and \$6. Send these to me at the following address. Happy computing!

David Goben
67 Highland Road
Mansfield Center, CT 06250

(Editors Note) If you are the original author of a public domain or shareware program, or the authorized distributor of a PD or shareware program and want it reviewed by CN80, send it along with a hard copy of your documentation and your description of what the program does to this publication at PO Box 680, Casper, WY 82602. Also include instructions concerning the distribution of your program.

We will soon be making the programs published in CN80 available on Disk along with other PD programs that are made available to us for distribution. More details concerning our disk series will be available in our next issue. -Ed.

HINTS, TIPS, AND VISITS WITH YOUR
FELLOW READERS

EPSON SCREEN-DUMP PROGRAMS

Volume 1, No. 3, Page 16 had a request from J.P of Marbelton, Georgia for a Model III to Epson Screen-Dump program.

A program I wrote for this purpose was published in 80 Micro for November, 1985 page 16. I enclose a copy of the published program.

I later found that it wouldn't work with the LX-80 printer, and I also enclose a copy of the LX-SCREEN-DUMP program.

I found the problem with Mod III SCREEN-DUMPS to be an obstinate refusal to output carriage returns without line feeds from software control. The MX SCREEN-DUMP set the line feed to zero, but this didn't work with the LX printer and the LX program uses the reset to get around the problem. I hope one of these will work for J.P.

Robert Keegan, Fayetteville, AR

Thanks for sharing your programs with us and with J. P. Your letter was forwarded to J. P. on March 27th the day it was received. See program listing Number two and three for Robert's programs. Mr. Keegan is an attorney, specializing in Patents and Trademarks.

CORRECTION

Two typographical errors mar the "Envelope Addressing Tip" article in Computer News 80, Volume 1, Number 5, pages 9 and 10. In paragraphs four and 10 (both page 9), where the article mentions "CONTROL?" as the order to stop the printer, it should instead say "CLEAR?," as users of SuperSCRIPSIT no doubt know. The errors are mine, and I apologize for them.

-Albert C. (Chad) Skaggs

CORRECTION AND HINT

On page 11 there is an error in the resistor values given. The number is correct, but they should be in ohms. The pf stands for pico farads and refers to capacitors. No real big deal for someone with electronics knowledge as they would catch it, but it could be embarrassing for someone who asks to have it done as it could result in confusion.

As an aside for your other readers information: The enhanced Basic provided

with LSDOS 6.3 does not function the same as the 6.2 Basic. I have had problems with some programs I enhanced for a client when we upgraded to 6.3. A quick solution is to copy Basic from your 6.2 disk onto the 6.3 disk. I borrowed from MSDOS and called the 6.3 version BASICA/CMD and the 6.2 version remained BASIC/CMD, I have had no problems and saved myself major rewrites to the software system they have been using for much time now. Results - a satisfied client and less headaches. Now if I can only find out why the differences and if Logical Systems is working on a fix.

L.G.N. Sr.-Webster, MA

LIMITED BACKUPS

Regarding the matter of limited backups of old Tandy programs. I should like to answer the question by letting those concerned know that the backup counter of Mod 4 programs like pfs:file is byte C6 in the third sector (sector 2) of the first track (track zero). A value of 01 in that byte means one more backup, FF means no more backups. With a Zap program one can simply change the FF back to f.i 08, and restore the program to life again. In the Mod III programs, like Scripsit and Visicalc, it is in the boot sector, byte 22.

P.J.P.-Amsterdam, Holland

THE DISK MAZE

There are as many disk brands on the market as there are fish in the sea and we don't have the vaguest idea which brand or manufacturer is the best. Almost every supplier has a generic brand that he sells under his own label or with no label at all.

Reliability of the disks are based on the users experience with any one brand and everyone seems to have his own preference.

We recently purchased 100 single sided and 200 double sided 5-1/4 double density floppy disks from a supplier for 24 cents each, sans-sleeves and user labels. Naturally there was no manufacturer's label affixed, and in this case not even the suppliers label. We could have saved time by giving them an order for 200 double sided disks because when they arrived they were identical. In

checking with the supplier, we were told "Yes - they are the same disks, all double sided."

These economy disk are a less rigid in their jacket construction than we were used to and require a little more care in inserting in the disk drive.

Over the years, like everyone else, we have purchased many different brands of disks, a lot of them because they were on sale at the local discount department stores, finally settling on the one we felt most comfortable with. Personally we like a more rigid disk jacket for daily use (in and out of the drive all day). The lower priced disks, which usually have a more flexible jacket, are just fine for storage of backed-up data.

The experts at 3M Hot Line [800-328-9438, or call collect 612-736-9524 if you live in Minnesota] tell us that their disks are guaranteed for the lifetime of the disk, which they claim is 200 years, and not the lifetime of the owner. That's fine with us but who can wait around for 200 years, or for the 30 million passes to see if there really is a disk failure coming up. So we will have to take their word for it.

What it amounts to is this; with most disk suppliers, if you get a bad sector on the first format after taking the disk out of the box, then it is a bad disk and they will replace it. Of course no guarantee for lost data. That's always (according to the manufacturer, of course) the fault of a faulty computer, or faulty operator, a magnetic field somewhere in the vicinity, or strawberry jam, or a nice splash of coffee or cola. And then there are those programs that refuse to behave and eat all the data in sight.

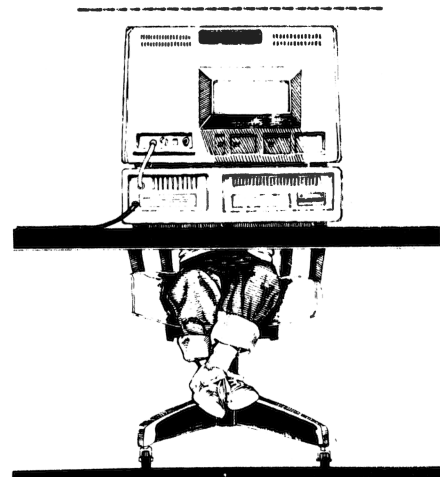
Our own experts tell us that the sheen of the disk is one way to tell the better quality disks. Each manufacturer burnishes his disk to a low abrasion level or sheen. Hold two disks next to each other and the one that has the highest shine, or polished appearance is the better disk to use. The disk with the dull finish will cause more abrasion on the drive head. There are other disks that are Teflon coated and could have a dull finish. Also, the shine test would

more than likely be disputed by the dull finish manufacturer.

In our never ending search for the truth it becomes apparent that if you use only one disk daily for all your work and for a lifetime, or at the end of five years or so, you could tell us how that brand of disk held up.

We do intend to stay on truth's trail and report any findings. We certainly hope that in the process we don't have to experience - EVER - a total disk failure just so that we could report which disks failed the most often.

We have received many requests from readers about how often and how to clean the disk drive heads. We have as yet not found a real definitive source. 3M says that your drive head should be cleaned about every 40 hours of use, or once a month under normal environmental conditions. They also said that their cleaning kit is non-abrasive and would not scratch the drive head. We are waiting for a written response from the drive manufacturer to get his opinion, when we receive that we will publish it too. As far as the "how", just follow the instructions in the disk cleaning kit that you purchase. It might be wise to purchase only disk cleaning kits put out by one of the known major disk manufacturers. Private label kits might save a couple bucks but you will never know who made the kit and I am sure that most distributors of the kits would not be much help if some damage did result over the long period of time that it would take for the damage to show up. A few dollars spent for a major brand cleaning kit might just be worth the investment.



I told you, HE IS..working
on your problem.....

A VISIT WITH DAVID GOBEN

PASSWORDS, NON-MODIFYING MODEL I DISK READS, TRSDOS 1.3 AND THE XLR8ER, AND MORE PATCHES, 80 MICRO

Hi there. First off, in the past I have said that Roy Soltoff was the principle author of LS-DOS. Boy, if you want to read about people chastising me, try reading some of my mail. Well, from my point of view, he IS. After all, my stand has always been that the original author of something is ALWAYS the principle author, especially as long as the code has not been drastically changed. So here is the proclamation that I will make, and hopefully my mail will subside a bit. Roy Soltoff is the principle designer of LDOS 6.0 (also known as TRSDOS 6.0). William Schroeder and LSI are the authors of TRSDOS 6.1, 6.2, and LS-DOS 6.3 (I certainly did not intend to slight them of this credit, but the simple fact is, LSI only built upon the foundation that Roy had set. Further, I do not wish to slight Mr. Schroeder further in this light, in that he is certainly a GREAT programmer in his own right). So all of those people who told me to get stuffed for even THINKING that Roy had ANYTHING to do with the development of TRSDOS 6 AT ALL... Well, may I direct your attention to page 12 of the April 1986 issue of 80 MICRO. There, Roy states "As the primary author of TRSDOS 6.x, I steadfastly believe...". Is that an admission of guilt, or what? Besides, I just got off the phone with him, discussing this very thing. Case closed.

I might point out that one error I made which no one mentioned (except Roy) was that I had misquoted the price of the LDOS 5.3 Model III upgrade in Volume 1.4 of CN80. I had stated \$24.95. It is ACTUALLY \$34.95. Still cheap. Sorry about that, Roy. Another error that I am almost afraid to mention, which did not originate with me, is the JCL file associated with my SYSDRV program. First of all, SYSDRV can be used by itself, in the form SYSDRV :d, where :d is the new drive. Secondly, the last line of the JCL file should be TWO lines, where COPY /SYS:0 :2 and SYSDRV :2 are separate lines. The DEBUG at the end of one of my columns was also incorrect in attempting to correct it. And speaking of errors, how about being a little more

forgiving? If you note an error, don't send a 6-page letter outlining it to me; just make a note of it to us. We'll be sure to make mention of it. Errors are never intended. He who is without sin should throw the first stone.

Onward. During the course of the past couple of years, many of my regular (and many new) correspondents have asked me how they can read their Model I single-density disks on their Model 4 and not resort to the REPAIR utility. Normally this is not a problem, unless you fit into the category of also having (and still using) a Model I. Most people simply copy the data files to another disk on their Model I, and REPAIR that disk. But that is not the fastest method. A simpler way is to fool TRS/LS-DOS 6 to think that the disk IS already repaired. The following three lines can be used on TRSDOS 6.x and LS-DOS 6.x to allow Drive :1 to simulate a Model I system drive:

```
SYSTEM (DRIVE=1,WP=Y)
MEMORY (ADD=X'18F4',WORD=X'00AF')
MEMORY (ADD=X'0483',BYTE=17)
```

You can save this in a JCL file, such as MODEL/JCL, for easier activation down the road. The first line sets drive :1 up as write-protected disk. The second line modifies the DOS code so that when the directory sector on the Model I disk is read, that it will accept it as a SYSTEM sector. The last byte insures that the directory track is set at 17. Be SURE to change the third line if you know that the directory track is OTHER than 17 (I am simply assuming TRSDOS 2.3-compatible, 35-track disks). Secondly, copy what files you choose ONLY to a disk that has been previously logged onto your system. Since I have disabled the SYSTEM sector checking routine, ANY sector will be accepted on any disk, SYSTEM-protected or not. Thus the best advice is to simply copy the files from the Model I disk to the current system disk. This is the usual procedure, and 99% of its users will have no problems, but somehow there is always that 1% that tries to make anything easy into something hard. Finally, be sure to REBOOT the system after you have copied the files to remove the memory patch! Obviously, many people have simply patched their Model I DOSes to

accept the Model III/4 system sector-types so that a Model I user can continue to use a REPAIRED disk, but there are so many DOSes, and I do not care to research each one just to provide patches for just a few individuals. However, if you do have such a patch for your Model I DOS, send it to me and I'll give it out, and mention you as the generous soul.

You know, if more people were like Arthur Davenport of Melbourne, Florida, my creative efforts here would be a breeze. As I was touching up the password encoder/decoder program that is being presented this month, he comes along and sends me a nice little program that does the same thing. What I liked about his program was not only his wonderful programming style (were it that more would write like that), but also his presentation of the data. Where my program only gave you the FIRST password decoded, his would continue on and display more as they were found, until you pressed the BREAK key. He also had a nice menu selection display. There was enough in it that I liked that I decided to use his principle presentation, and enhance it with the features that I had developed in my program. What I did was set up a scrolling window for decoded word output at the bottom of the screen, I added more report feedback, added an ON-SCREEN decoding update (so you can actually WATCH a password being developed), cleaned up screen wrap-around, fixed up the BREAK interrupt to ALWAYS work and be cleaner on the display output, converted any lower-case data to upper-case during processing, and modified it so that the program will run on a Model I, a Model III and a Model 4 (in 4-mode).

The menu of the program allows you to encode and decode all Model I/III/4 DOS passwords. What this boils down to is that all DOS systems (except TRSDOS 1.3 for the Model III) use the same hashing formula. TRSDOS 1.3, which is different from everything else from the git-go, uses a totally different method. This TRSDOS 1.3 format option is made available.

I would like to mention that Arthur seems to be quite adept with the TRSDOS 1.3 system, and I certainly hope that he will no longer be a stranger to Computer News 80,

but I sincerely hope that he will contribute information and assistance in future issues as well. Arthur sent me a rather long but fascinating letter along with his disk and program listing, and I would like to take a moment and share a little of what Arthur has been doing with his life, as sort of a personal profile of a CN80 reader. Arthur, in 1975, built his own 8080-based computer, basing it on an 8008-based MARK 8 from Radio Electronics. He redesigned the input to use later-version IC's and to get more input channels. He also home-built a Digital Group compatible computer. Both of these were tape-based, which was the 'boone' back in those days, before disk-drive were feasible, or even purchasable. When he got a disk-based Model III, it must have been like driving a Porche for the first time (something that I've done only once). He was unsatisfied with the DEBUG monitor, and so wrote his own (this is MY kind of guy). To top this profile off, Arthur worked for RCA on the Eastern Test Range at Patrick Air Force Base for 27 1/2 years, where he worked on microprocessor systems.

Program Listing Number 1 is a BASIC program that can be typed in and RUN from Model I, Model III, or Model 4 Disk BASIC. It will create a program called PASSFIND/CMD. To use it, from the DOS Ready prompt, enter PASSFIND. It will display a menu of 5 choices. Option 1 will generate passwords from encoded 2-byte 'hash' values. This process can take some time, which is one reason that I included on-screen feedback during generation, so that you would not think that the computers has frozen up at times. Normally at least one password will be generated within 30 seconds. Option 2 allows this same feature for TRSDOS 1.3. Option 3 allows you to encode a password, such as PASSWORD. It will return a 2-byte value which is the same code that will be stored as the encoded password in a directory file entry. If you don't know what I'm talking about, then skip this section, as this program is actually for those who are 'hackers'. Option 4 allows you to do the same thing, but for TRSDOS 1.3. Option 5 allows you to escape from the program and return to DOS. During options 1 and 2, you can press BREAK to escape from the option at any time, or during an input prompt.

Here's an example, Encoding PASSWORD under option 3 gives you a value of E042. PASSWORD under option 4 for TRSDOS 1.3 will result in D38F (I see a lot of lights appearing above the heads of some of you out there who have been previously confused by this). Decoding E042 under option 1 will give you quite a number of passwords (as is usual for any encode password, as several password produce the same hash code, just as some of you have found out that a key for one lock sometimes also works on another). The first 4 are WXP, FKB0, WIR0, and EX51. Decoding D38F for TRSDOS 1.3 under option 2 results in the first four being RO30, QS31, P9G1 and F936. Were you to have the patience to wait long enough, eventually the original PASSWORD would be presented. But my idea is that you would be waiting a LONG time for our program to get up into 8-character passwords. Why not use one that is 3 or 4 characters long instead?

MODEL I LDOS FROM 1988-2000

I have received a lot of mail from Model I LDOS owners who are complaining that they cannot use dates beyond December 31, 1987. Some have even stated that there is a conspiracy on the part of LSI and MISOSYS to make the Model I obsolete. Well, the fact is, the Model I IS obsolete, but that has never stopped me from using mine. However, MISOSYS has come out with some patches. These patches allow the system date to work up through the year 1999, but dates are disabled on disks. It may not be exactly what you are looking for, but you can get the patches in one of 4 ways.

1) Purchase the DISK NOTES 2.2 from MISOSYS for \$10 plus \$2 S&H for US, CAN, and MEX (\$3 elsewhere), which contains them. This is supplied on Double-Density medium. 2) Purchase Volume 2.2 of THE MISOSYS QUARTERLY, which runs at the same price. 3) You can download them from the LDOS section of the COMPUSERVE Forum, or 4) obtain them off of one of many bulletin boards.

Perhaps someone, like what Michael Jacobs Consulting did for TRSDOS 6.2, will make some patches available, which will allow date stamps to remain on your disks. Anyone want to try?

PATCHES, PATCHES, PATCHES

Those of you using LDOS 5.3 and want just the short filename listing during a DIR can patch your system with:

```
PATCH SYS6/SYS.SYSTEM (D08,92=00
00:F08,92=FF FF)
```

Hereafter, if you want the long, detailed listing, you will have to use the A=Y parameter.

Another patch to LDOS 5.3 is to allow an AFLAG\$ location. Model 4 hackers will recognize AFLAG\$ as storing the cylinder number that TRS/LS-DOS 6 uses to begin its search for unallocated granules. Using this, you can set it to 17 or whatever, to begin storage of system files, thus placing them close to the directory. Afterward you would probably wish to reset it to a value of 1. This patch was originally developed by Martin Pollard of St. Clair Shores, MI, and is now an OFFICIAL part of LDOS 5.3, as reported by MISOSYS, the owner of the DOS. If these two patches don't "take" on your system it is probably because it has already been incorporated into your MASTER disk, as this patch came out in the later part of 1987. The patches are:

```
P A T C H   S Y S 0 / S Y S . S Y S T E M
(D05,C1=01:F05,C1=00)
PATCH STS8/SYS.SYSTEM (D00,F5=F5 3A
67 47 6F F1:F00,F5=2E 01 00 00 00 00)
```

Thereafter, the location of AFLAG\$ is at X'4767', and is called the Allocation Flag.

This next tid-bit is not actually a patch, but an undocumented feature of LS-DOS 6.3's BASIC. That is, LSI has revealed that the single character "!" is an abbreviation for SYSTEM. Thus you can press the exclamation mark (SHIFT-1) and press ENTER to go back to DOS. It will also work with a following string. Repeat, this is an undocumented feature.

If you have Radio Shack's Assembly Language Development System (ALDS), you may have been both happy and disappointed with their ALBUG program. Happy because it makes debugging a WHOLE lot easier, in the most part due to its built-in mini-disassembler, but disappointed because you could not examine code below X'3000',

which is a bother if you are writing a program that operates in the X'2600' - X'2FFF' area. To get by this and allow ALBUG to display ANY address, apply the following patches to the Model 4 version:

```
PATCH ALBUG (D04,06=00:F04,06=30)
PATCH ALBUG (D04,0F=FF:F04,0F=DF)
```

A tip of the hat goes to Glenn A. Dobbs.

For you TRS/LS-DOS Model 4 BASIC programmers, if you've ever accidentally saved a BASIC program with the "P" option (Protected), you can recover your file into its unprotected by doing the following: Go into BASIC, load the protected file, and then enter the command SYSTEM"MEMORY (ADD=X'72CB',BYTE=0)". This will unprotect it. Thanks to Brent Brian of Stantonsburg, NC.

Paul Jaeger has a patch to LS-DOS 6.3 to shorten the tones of the @SOUND routine, which he feels (along with about everyone else) that they are too long.:

```
PATCH SYS0/SYS.LSIDOS (D10,83=00 00 00
00 00 00:F10,83=CB 24 CB 25 CB 21)
```

(ZOUNDS! I used the right password.)

TRSDOS 1.3 and the XLR8ER BOARD

In issue 1.4 of CN80, page 6, Michael Jacobs mentioned that LS-DOS 6.3 does not run reliably with the XLR8er Board from the folks at H.I.Tech, Inc. This is not true. The fact is, it runs beautifully. There IS a problem with TRSDOS 1.3, however. Michael probably spotted his mis-type after CN80 1.4 had already gone to press. For reasons that border on stupid, the author(s) commissioned by Tandy (notice that Tandy is NOT to blame here) used undocumented Z80 machine codes in the writing of the DOS. Zilog, producers of the Z80 chip, report that on some chips, that these instructions can be UNRELIABLE, for the simple fact that Zilog does not test them in their quality control department (another reason for them being undocumented). For this reason many Model III and 4 owners have been able to boot most other Model III or 4 DOSes, but cannot boot TRSDOS 1.3 without problems cropping up. Tandy in turn has to go through the expense of taking the

computer to shop so that a technician can go through the headache of tracking the booting problem down. A Tandy techie friend told me recently that whenever he receives the "TRSDOS 1.3 won't operate properly" problem report, he simply tries to boot up LDOS or TRSDOS 6. If they work, he simply replaces the Z80 chip, does a verify test, and then returns the machine to the customer.

Gary Lee Phillips addressed this problem in Issue II.1 of THE MISOSYS QUARTERLY, and provided the patches to correct this. The reason that the special instructions will not work on the XLR8er Board is that the HD64180 chip, which is a special multi-banking chip that contains the Z80 instructions as a sub-set, DO NOT support the undocumented Z80 instructions. Computer fall down and go boom. The patches to correct this replace these special instructions in TRSDOS 1.3 with "authorized" instructions. The patches, in TRSDOS 1.3 format are, and PLEASE note that NO spaces should appear between the parenthesis (), even though I include one after each comma for the sake of word-wrap on these narrow columns:

```
PATCH *2 (ADD=4EBF, FIND=FD2EFFE1,
CHG=FD21FF42)
PATCH *2 (ADD=4EC3, FIND=F1F1FD2642,
CHG=E1F1F10000)
PATCH *7 (ADD=5284, FIND=DD2662DD2E24,
CHG=000000000000)
PATCH *7 (ADD=528A, FIND=DD7E00,
CHG=003EFF)
```

Gary makes a side-note stating that this patch also eliminates the limited BACKUP feature of TRSDOS 1.3 (Oh, how terrible. Boo-hoo). A point of interest concerning Gary's article is that it also shows LDOS 5.3 users who have the XLR8er Board mounted on a Model 4P how to create a special MODELB/III file that will initialize the system to take full advantage of the board's special CPU features and speed.

So goes another column. Hopefully what I am providing here is to your liking. My mail tends to reflect that it is, especially to those out there who are hackers, or simply interested in the patches given. A final note to you that not only write to me: PLEASE enclose a self-addressed stamped

envelope if you desire a reply.

Happy computing.

—David Goben
67 Highland Road
Mansfield Center, CT 06250

(Editors Note:) If you desire to send your patches to share, questions for the columnist in CN80, or submit articles please send them directly to this publication. {Self-addressed stamped envelopes are not required} Your mail will be acknowledged and forwarded to the proper author, and the reply sent directly to you or as in most cases published. It is the only way we can be sure that we are sharing the problems we answer for you with those who might have the same problem.

However if you do choose to write directly to anyone who is published in CN80, we would request that you include return postage to cover their replies. Now that the U S Post Office is operating under the "four for a dollar" system it can become expensive for reply mail, not counting the time it takes to construct a reply. -Ed.

PROGRAM CORRECTIONS:

Vol 1 No. 4 page 17

NEWDOS/CMD & NEWDOS/BAS Program

Line 310 should read D6, instead of just 6, in the third entry from the end of the line.

Vol 1 No. 5 Program listing #1 on page 14 and program listing #4 on page 16 had two lines that the printer over justified, line 65 on page 14, and line 27 on page 16 should have the spaces removed to make one continuous entry line.

THANK YOU

The quick reply received from Mr. B. with regard to Spectre Technologies' 'LONG & LOUD' program I was having a problem with is at least the best response I have ever had on any attempt to obtain any help from either a company or an individual. I was astounded to receive such a fast response to

just the mere mention of a problem in my previous letter to you. This will let you know that positive correspondence is circulating about TRSDOS support, we who have these wonderful machines just may even become more closely-knit than before.

Mr. B. told me that there had been new releases of the subject program, and it did have TRSDOS printed instructions. This is something I thought was possible, but never got an answer to my letter when writing Spectre Tech. about it. I don't think kicking a dog is the proper thing to do, so I will wait a few more days to see if I hear from them, then write another letter to let them know that their attitude has chased away additional business. Other programs I have in mind possibly will give a little support. I certainly did not get any from Spectre.

Once again, many thank for getting Mr. B. and me together. This is a much-appreciated service.

Best regards,
M.H.O.-Temple, TX

ANSWER TO A CONCERNED READER

Occasionally I still use Model 1 (one Model 4 at home and one at work) with 64K and Holmes internal Memory, Extron Floppy, I would be interested in articles on C. I have the Alcor Version. I have no intention of going to LOSDOS 6.3, I am affraid that if I replace any parts, it will reject the modified machine.

W. T. C. -Westwood, MA

Don't worry about it, we have four modified machines, one LS-Dos 6.3 (the same one has been used on all four) and as our last two issues have pointed out, we have been upgrading and modifying. LS-DOS 6.3 doesn't know the difference between one machine and the other. Until someone can show us different, their so called protection plan that is supposed to tell one machine from another doesn't exist. Ask Tandy, they supplied the last two LS-DOS disks with the Model 4D's we purchased, and as far as we are concerned they are the responsible supplier. -Ed

PROGRAM LISTING NUMBER ONE- David Goben
This program will run on Model I, III, & IV

```
20 CLS:PRINT"BUILDING 'PASSFIND/CMD'":RESTORE
30 OPEN"O",1,"PASSFIND/CMD":L=80:HX$="0123456789ABCDEF"
40 CS=0:L=L+10
50 READ A$:IF A$="END"THEN CLOSE:END
60 IF LEFT$(A$,1)="-"THEN 70
65 A=INSTR(HX$,LEFT$(A$,1))*16+INSTR(HX$, RIGHT$(A$,1))-17
66 PRINT#1,CHR$(A);:CS=CS+A:GOTO 50
70 IF VAL(MID$(A$,2))=CS THEN 40 ELSE PRINT"CHECKSUM ERROR IN LINE"L:END
80 ''' DATA AREA '''
90 DATA 05,09,00,00,00,50,41,53,53,46,49,05,09,00,FF,6F,20,20,20,20,-976
100 DATA 20,20,01,FE,FF,6F,21,00,00,7E,46,2F,77,BE,70,20,49,21,00,00,-1520
110 DATA 44,3E,64,EF,23,7C,B5,28,09,21,73,75,CD,DA,72,C3,AD,73,AF,32,-2368
120 DATA 47,73,21,B8,FF,22,C9,70,3E,50,32,1B,72,32,1F,72,3D,32,38,72,-1814
130 DATA 21,80,FF,22,27,72,21,30,FF,22,0C,72,3E,08,32,00,72,3E,65,EF,-1735
140 DATA FD,7E,0E,E6,FE,FD,77,0E,D3,84,31,FF,6F,21,DC,73,CD,DA,72,CD,-3131
150 DATA 45,73,28,04,FD,CB,0A,86,CD,E2,72,FE,31,38,F9,FE,35,CA,AD,73,-2778
160 DATA 30,F2,F5,32,47,75,21,45,75,CD,DA,72,F1,FE,31,CA,90,70,FE,32,-2835
170 DATA CA,99,70,FE,33,CA,50,72,C3,A7,72,21,42,71,22,28,71,C3,9F,70,-2509
180 DATA 21,71,71,22,28,71,21,02,75,CD,DA,72,21,C5,73,06,04,CD,23,73,-1845
190 DATA 78,B7,CA,9B,72,CD,EC,70,DA,9B,72,ED,53,C3,73,7A,B3,CA,9B,72,-3216
200 DATA CD,68,73,E5,22,18,72,01,C8,FF,09,22,45,71,36,41,06,08,23,36,-1728
210 DATA 20,10,FB,CD,8F,73,21,4B,75,CD,DA,72,E1,CD,8F,73,AF,32,FD,71,-2803
220 DATA C3,27,71,21,C4,73,CD,F8,70,5F,CD,F8,70,57,C9,CD,05,71,01,FE,-2782
230 DATA FB,70,07,07,07,07,57,CD,05,71,82,C9,23,7E,CD,0B,71,C9,CD,34,-2080
240 DATA 73,FE,30,38,0C,FE,47,30,08,FE,3A,38,09,FE,41,30,03,C3,9B,72,-2077
250 DATA D6,07,D6,30,B7,C9,CD,42,71,ED,5B,C3,73,7C,92,20,02,7D,93,CC,-2669
260 DATA E5,71,CD,A7,71,DA,AD,73,CD,B0,72,18,E5,06,08,21,00,00,11,07,-2152
270 DATA 00,19,EB,21,FF,FF,CD,33,73,D5,57,5C,7D,E6,07,0F,0F,0F,AD,6F,-2257
280 DATA 26,00,29,29,29,29,AC,AA,57,7D,29,AC,AB,5F,EB,D1,1B,10,DF,C9,-2146
290 DATA 21,FF,FF,ED,5B,45,71,06,08,7B,C6,07,5F,30,01,14,CD,33,73,D5,-2143
300 DATA 57,5C,7D,E6,07,0F,0F,0F,AD,6F,26,00,ED,52,29,29,AC,AA,57,7D,-1863
310 DATA 29,AC,AB,5F,EB,D1,1B,10,DF,7C,B5,C0,2C,C9,06,08,2A,45,71,AF,-2344
320 DATA 32,D5,73,7E,CD,BA,71,D0,23,10,F8,37,C9,FE,39,28,0B,FE,5A,28,-2517
330 DATA 0B,FE,20,28,1A,3C,77,C9,3E,41,77,C9,3A,D5,73,B7,20,08,3C,32,-1909
340 DATA D5,73,3E,41,18,02,3E,30,77,37,C9,3E,30,77,B7,C9,ED,5B,45,71,-2089
350 DATA 21,08,00,19,36,03,E5,EB,CD,16,73,E1,36,20,01,FE,F7,71,3E,2C,-1961
360 DATA CD,4B,73,3E,00,3C,FE,07,20,01,AF,32,FD,71,C0,CD,68,73,11,C0,-2227
370 DATA 3F,ED,52,30,05,3E,0D,C3,4B,73,11,00,00,21,40,00,19,01,40,00,-1099
380 DATA ED,B0,E5,D5,11,00,40,A7,ED,52,D1,E1,20,EF,62,6B,CD,8F,73,13,-2814
390 DATA 36,20,0E,3F,ED,B0,C9,FE,0D,28,30,E5,C5,7E,FE,20,C2,9B,72,23,-2468
400 DATA 10,F7,C1,E1,7E,18,20,21,42,71,22,8B,72,21,22,75,CD,DA,72,06,-2089
410 DATA 08,21,CA,73,22,45,71,CD,23,73,2A,45,71,7E,CD,34,73,38,CC,48,-1983
420 DATA 3E,08,90,47,79,C2,82,72,FE,0D,C2,8A,72,06,08,18,02,85,6F,3E,-1903
430 DATA 20,77,23,10,FC,CD,42,71,22,D3,73,21,D3,73,CD,F2,72,21,EB,74,-2502
440 DATA 18,03,21,DA,74,CD,DA,72,CD,E2,72,C3,53,70,21,71,71,22,8B,72,-2412
450 DATA C3,56,72,CD,45,73,28,08,FD,CB,0A,46,C8,C3,53,70,F5,3A,40,38,-2381
460 DATA E6,04,20,02,F1,C9,3A,40,38,E6,04,20,F9,06,FF,10,FE,C3,53,70,-2324
470 DATA 3E,0D,CD,4B,73,7E,FE,03,C8,23,C3,D7,72,D5,CD,45,73,28,05,3E,-2321
480 DATA 01,EF,18,03,CD,49,00,D1,C9,CD,01,D4,F3,72,F6,72,23,7E,CD,FE,-2710
490 DATA 72,7E,C3,02,73,0F,0F,0F,0F,E6,0F,C6,30,FE,39,CA,10,73,DA,10,-1981
500 DATA 73,C6,07,D5,CD,4B,73,D1,C9,7E,23,FE,03,C8,CD,4B,73,FE,0D,20,-2650
510 DATA F4,C9,CD,45,73,28,05,3E,09,EF,18,03,CD,40,00,C3,B0,72,1A,FE,-2250
520 DATA 41,D8,FE,5B,38,07,FE,61,D8,FE,7B,3F,D8,E6,5F,C9,C5,06,01,05,-2647
530 DATA C1,C9,CD,45,73,CA,33,00,C5,4F,3E,02,EF,C1,C9,CD,45,73,20,04,-2434
```

con't next page.

540 DATA 2A,20,40,C9,C5,06,04,3E,0F,18,ED,CD,45,73,28,F0,CD,61,73,44,-2038
 550 DATA 11,50,00,62,6C,04,18,01,19,10,FD,11,00,F8,19,C9,CD,45,73,20,-1538
 560 DATA 04,22,20,40,C9,C5,06,03,18,D5,CD,45,73,28,F2,E5,D5,11,00,F8,-2156
 570 DATA AF,ED,52,11,50,00,3C,ED,52,30,FB,19,3D,67,CD,8A,73,D1,E1,C9,-2551
 580 DATA CD,45,73,CA,2D,40,FD,7E,0E,F6,01,FD,77,0E,D3,84,21,00,00,3E,-2164
 590 DATA 16,EF,00,00,01,03,D2,73,03,01,03,D5,73,00,01,FE,DC,73,1C,1F,-1574
 600 DATA 2A,2A,2A,20,20,50,20,41,20,53,20,53,20,46,20,49,20,4E,20,44,-1014
 610 DATA 20,20,43,20,4F,20,4D,20,4D,20,41,20,4E,20,44,20,20,4D,20,45,-1009
 620 DATA 20,4E,20,55,20,20,2A,2A,2A,0D,2E,2E,2E,2E,2E,2E,41,72,74,68,-1105
 630 DATA 75,72,20,42,2E,20,44,61,76,65,6E,70,6F,72,74,20,77,69,74,68,-1830
 640 DATA 20,44,61,76,69,64,20,47,6F,62,65,6E,2E,2E,2E,2E,2E,2E,2E,0D,-1378
 650 DATA 31,20,20,20,46,69,6E,64,20,45,71,75,69,76,61,6C,65,6E,74,20,-1648
 660 DATA 50,61,73,73,77,6F,72,64,73,0D,32,20,20,20,46,69,6E,64,20,45,-1611
 670 DATA 71,75,69,76,61,6C,65,6E,74,20,50,61,73,73,77,6F,72,64,73,20,-2015
 680 DATA 66,6F,72,20,54,52,53,44,4F,53,20,31,2E,33,0D,33,20,20,20,43,-1243
 690 DATA 6F,6D,70,75,74,65,20,48,61,73,68,20,43,6F,64,65,0D,34,20,20,-1626
 700 DATA 20,43,6F,6D,70,75,74,65,20,48,61,73,68,20,43,6F,64,65,20,66,-1730
 710 DATA 6F,72,20,54,52,53,44,4F,53,20,31,2E,33,0D,35,20,20,20,45,78,-1265
 720 DATA 69,74,20,50,72,6F,67,72,61,6D,01,DB,D8,74,0D,03,0D,49,4C,4C,-1787
 730 DATA 45,47,41,4C,20,65,6E,74,72,79,21,21,21,0D,2E,2E,2E,50,72,65,-1420
 740 DATA 73,73,20,61,6E,79,20,4B,65,79,20,2E,2E,2E,0D,03,49,6E,70,75,-1517
 750 DATA 74,20,48,61,73,68,20,43,6F,64,65,20,28,34,20,43,68,61,72,61,-1582
 760 DATA 63,74,65,72,73,29,0D,03,49,6E,70,75,74,20,50,61,73,73,77,6F,-1799
 770 DATA 72,64,20,28,38,20,43,68,61,72,61,63,74,65,72,73,20,4D,61,78,-1724
 780 DATA 29,0D,03,0D,3C,30,3E,20,03,20,3C,2D,2D,43,6F,6D,70,75,74,69,-1194
 790 DATA 6E,67,2E,2E,2E,20,28,50,72,65,73,73,20,42,52,45,41,4B,20,74,-1485
 800 DATA 6F,20,61,62,6F,72,74,29,03,20,43,61,6E,6E,6F,74,20,6F,70,65,-1722
 810 DATA 72,61,74,65,20,6F,6E,20,4D,6F,64,65,6C,20,34,20,77,69,74,68,-1770
 820 DATA 20,68,69,67,68,20,6D,65,6D,6F,72,79,20,6D,6F,64,75,6C,65,73,-1938
 830 DATA 20,70,72,65,73,65,6E,74,2E,0D,03,02,02,FF,6F,-1233
 840 DATA END

WATCH YOUR ZERO's & "O's"

This is a ZERO....000000000000.....(oval as in GOOSE EGG!)

This is an OH, OH....00000000.....(round as in OH-OH!)

BACK ISSUES ARE AVAILABLE \$ 2.00 each.



PROGRAM LISTING NUMBER TWO -Robert Keegan
A Model III Screen to RX dump program.

```
990 'MX SCREEN DUMP FOR MIXED GRAPHICS-TEXT V.3 ** RRKEEGAN COPR. '85
991 SC=15360:LPRINTCHR$(27)"A"CHR$(4):A1$=STRING$(3,240):A0$=STRING$(3,0)
: I7=128:FORI=0TO15:I6=I*64:GOSUB995:FORJ=0TO4STEP2:XX=2[J:I1=XX+XX:LPRINTCH
R$(27)"K"CHR$(128)CHR$(1):;FORK=0TO63:P=PEEK(I6+K+SC):IFP<I7THENP=I7
992 IF((P-I7)ANDXX)THENLPRINTA1$;ELSELPRINTA0$;
993 IF((P-I7)ANDI1)THENLPRINTA1$;ELSELPRINTA0$;
994 NEXTK:LPRINT:NEXTJ:NEXTI:LPRINTCHR$(27)"@":LPRINT CHR$(13)CHR$(13)
CHR$(13):RETURN
995 FORK=0TO63:P=PEEK(I6+K+SC):IFP>126ORP<32THENP=32
996 LPRINTCHR$(P);:NEXTK:LPRINTCHR$(27)"J"CHR$(0);:RETURN
```

PROGRAM LISTING NUMBER THREE -Robert Keegan
Modification for program listing number 2 - LX Screen Dump Mod III

```
990 'LX SCREEN DUMP FOR MIXED GRAPHICS-TEXT V.3 **RRKEEGAN COPR. '85
991 SC=15360:LPRINTCHR$(27)"A"CHR$(6):A1$=STRING$(3,252):A0$=STRING$(3,0)
: I7=128:FORI=0TO15:I6=I*64:GOSUB995:FORJ=0TO4STEP2:XX=2[J:I1=XX+XX:LPRINTC
HR$(27)"K"CHR$(128)CHR$(1):;FORK=0TO63:P=PEEK(I6+K+SC):IFP<I7THENP=I7
992 IF((P-I7)ANDXX)THENLPRINTA1$;ELSELPRINTA0$;
993 IF((P-I7)ANDI1)THENLPRINTA1$;ELSELPRINTA0$;
994 NEXTK:LPRINT:NEXTJ:NEXTI:LPRINTCHR$(27)"@":LPRINT CHR$(13)CHR$(13)
CHR$(13):RETURN
995 FORK=0TO63:P=PEEK(I6+K+SC):IFP>126ORP<32THENP=32
996 LPRINTCHR$(P);:NEXTK:LPRINTCHR$(8)CHR$(27)"@":CHR$(27)"A"CHR$(6)
;;:RETURN
```

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OPEN FORUM AND READERS LETTERS

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I think it would be great if you could publish a tutorial column for machine language.

I have tried assembly language several times and all has ended in failure.

Popular Computing, Vol 4, 6, & 7
80 Micro #47,48,49
A.L.T. 26-2017 & 2018
A.L.D.S. 26-2012
Programing the Z-80, R. Zaks.

I hope you could start from scratch and go slow with lots of examples. I believe my problem was the lack of background.
F. G. W. -Palmdale, CA

How about it, anyone want to start with page one and go from there, we will gladly publish it. -Ed.

As a new subscriber I must write and tell you that you are off to a great start. My only objection is that the publication should be three or four times larger, as I devour it in short order when it arrives. I am writing with a few offerings which may be of interest.

A. PFS:file (ref: Vol 1, #1). I apparently do not have the latest version of the pfs:File manual in order to follow your directions for minimum pfs:File system disks; however, I did obtain the following procedure from our local Radio Shack Computer Center which works quite well.

1.> Convert the PFS:FILE disk to LS:DOS 6.3

2.> Place the PFS:FILE disk in drive 0 and enter the following:

AUTO PFS
SYSTEM (SYSRES=1) <ENTER>
SYSTEM (SYSRES=2) <ENTER>
SYSTEM (SYSRES=3) <ENTER>
SYSTEM (SYSRES=10) <ENTER>
SYSTEM (DRIVE=0,STEP=0) <ENTER>
SYSTEM (DRIVE=1,STEP=0) <ENTER>
SYSTEM (DRIVE=2,STEP=0) <ENTER>
SYSTEM (DRIVE=3,STEP=0) <ENTER>
SYSGEN <ENTER>

3.> Place a formatted Data Disk in drive 1 and enter the following:

BACKUP SYS12.SYS:0 :1 (S) <ENTER>

After booting the system with pfs:file, the pfs:file disk can be removed from drive 0 and replaced with the data disk. Every data disk so used must have the SYS12/SYS file in resident.

B. I am always amused at the scores of letters written by frustrated SuperSCRIPSIT users. Gripes and patches for this software have the most frequent reader items in recent times. You might encourage folks to do the only sensible thing - scrap this program and buy either LeScript or Allwrite. I've used the latter for two years now and find it powerful, fantastic, and it never glitches.

C. Keep Mr. Goben's articles coming. I hope that the other good contributors from the 80 Micro days will also soon join your bandwagon.

I use LSDOS 6.3 almost exclusively; however, there are some nice features found in DOSPLUS IV that are missing in LSDOS. One that I particularly like is the DATE CAL command that displays a calender in addition to the date. Is there a way to incorporate this feature into LSDOS?

Also, is there a patch to Tape 100/CMD so that tapes generated by a Model 102 laptop can be read by a Model 4D?
R. R. O. -Erie, PA

Its surprising how attached we get to our programs, they become almost like children that we will protect to the death when they are threatened, but complain about them exhaustively when they don't behave the way we think they are supposed to. -Ed.

I teach word processing on the Wang OIS and also have taught Word Perfect on IBM compatibles. I sincerely feel SuperSCRIPSIT is a super value - function vs. dollar!!

It is slow on my Model 4 P because it has to read the disk all the time but dependable and versatile. I use it with a DWP410 printer so I really get camera-ready copy.

P. M. - Longmont, CO

We enjoyed your introductory Computer News 80 and are relieved to read that our TRS-80 is not completely deserted. As a former Micro 80 subscriber we found after searching the Print Market considerably, we were almost convinced updating to a MS-DOS system, feelings were that support or our Model 4 was N.A. We have been using the TRS-80 for three years and finally have it to a working level for our Auto Repair Service, having at most designed & tailored Profile 4 Plus to suit our needs, to this point.

We would in the future like write-ups on Visicalc, SuperSCRIPSIT if feasible.

B.B. & S -Peabody MA

(Editors Note) As we grow, coverage of data base programs and many other things are in the planning stage.

This is mostly a note to say thank you for producing CN80.

I especially appreciated the info on pfs:FILE in the first issue. I had transferred it to LSDOS 6.3, but did not yet have it running. This is a program that is far more useful than the 80 Micro review indicated.

I am please to see that Mod 4 by Jack Klein is being republished by CN80, it is a handy reference.

I have purchased "Lair of the Dragon" by David Goben, and while I haven't had much time yet to work with it, I would recommend it to anyone with any gaming interest. Thank you.

C. N. D. -Star Lake NY

I suggest being cautious about version 1.80 of LeScript. I upgraded as soon as it was

announced, and the original copy was unusable. It was totally unreliable, would lock up my computer often, and the spelling checker didn't work at all. When I contacted them, they quickly sent me another disk on which they had fixed "all the problems we know about". This was better, but still caused (much less frequent) lockups and loss of data. The spelling checker also worked most of time. I recently called them, and they offered to send a third disk, implying that more bugs have been found. So far, their efforts to support the program have been excellent, but they did say that to get any more fixes, I'd have to use their standard problem report process. Hope the next disk does the job. I'll let you know as soon as I've tried it. For now, I'm using version 1.70 which, like all the previous ones has been very reliable.

D. S. -Scottsbluff, NE

I have a Model 4-P, 128K on which I run Tandy's Accounts Payable System, (Cat. No. 26-1542), version 02.02.00 using LS-DOS 6.3 with the MEMDOS installed as described in Don Coffin's article in the January 87, Micro 80.

If a credit transaction is entered for a vendor (to cover a return, or whatever) the General Ledger Distribution is thrown out of balance because the credit is not added into the credit column for the Accounts payable account.

I have contacted Tandy, who admit that it is a bug, but offers no help. Has anybody out there solved this problem?

C. P. -Fort Lauderdale, FL

Do you know of a screen dump program that will allow me to dump a high-resolution picture created with Radio Shack's BASICG to an Epson LX-86 dot matrix printer?

I am using a TRS-80 Model 4 with TRSDOS Computer Graphics disk 6.01. BASICG of course, it has several screen dumps for Radio Shack dot matrix printers-- but they dump garbage on the Epson LX-80.

I have Micro-Labs' GBASIC that has a

screen dump for an Epson printer, but the programming language is different. I could transfer all of the programs that I have written in BASICG to GBASIC, but I do not have the time to do that. Any help will be appreciated.

M. P. -Eureka, KS

First another plug for Lazy Writer. It doesn't do columns, but otherwise it performs whatever is needed in word-processors. Most commands are toggled. Everything is memory resident, which makes it fast. Printing can be performed with menu commands (toggled) or soft commands. Fonts and print types commands can be inserted into text. Underling exists. You name it. And the learning time is zilch. Call David Welch at Alphabit Communications, Dearborn, MI. What prompts me to write is the fact that your journal is filled with all kinds of problems with the Scripsit and its progeny. Lazy writer doesn't inspire requests for this help. And as I mentioned before, the combination of Lazy Writer and the Model 100 is unbeatable for uploading text to the model 4/4P.

The second item is the KSM files. It took me a long time to figure out that using the same dumb device one can create as many KSM files as needed. Thus, all you have to do to bring up the KSM file of choice is write a small JCL program for each one. Don't forget to reset the *KI etc. of the old before invoking the new.

For loading up all their application files on an 800K disk, for transfer to the Alpha board, I suggest Misosys's DiskDISK. This program allows you to package your applications on to virtual disks. Thus you don't have to pile all your programs on the 800K drive and copy them to ram. Instead, invoke DiskDISK and copy only those applications you need. This is neat, and keeps your files in order. It also uncomplicates the RAM, particularly since Profile 4 Plus jams up with certain programs.

Lastly, there is a program called Proaid 4+ by Clay Watts in Florida, (68 C North Loop Cedar Hill, TX 75104) which supplies Forms and a lookup program for Profile, which

SMALL COMPUTER never produced, because they got too involved with MSDOS.

Incidentally, there is a glitch in Profile 4 Plus, which stops the printer from printing out more than 100 lines. This resulted from a Tandy patch, and is corrected by a patch from Small Computer.

C. H. MD -Island Heights, NJ

Q: I just recently got a copy of Newdos/80 for my TRS-80 Model 1, level 2 machine. I used the format 5 copy format; COPY 01/06/01/80 FMT. I check the system options and the copy was the same as the source disk. I also used the PDRIVE,1 command to have the copy disk to have the same PDRIVE info as the source disk. I can't get the new copy disk to boot up the computer when reset. What else can I check? Any ideas?

P. S. I need the manual for TRSDOS for my Model I, where can I buy a copy?

D. R. J. -Middleburg, FL

A: The use of COPY 01 06/01/80 FMT causes NEWDOS/80 to create a DATA disk. Use the format COPY 01 and answer the prompts as required. This will create a systems Disk.

As for the TRSDOS manual, Radio Shack national parts should carry one. -D. G.

(Editors Note) If you recall last month we had a rather long question letter from D. R. J. of Middleburg, FL concerning the ham radio program RTTY. We haven't heard from any of you radio ham operators out there yet, how about a little help for a fellow ham operation!

However one good subscriber who had been helped before to solve a NEWDOS problem, spotted D.R.J's question, and took the time to let us know that he thought he could help solve the problem, and we put him in touch with D. R. J. -Many Thanks go to H. T. of Mobile, AL, for his taking the time to make the phone calls. -Ed.

Q: Has anybody ever tried changing the drives in a Model 4 or 4P to the later high capacity jobs. Since I have both a Mod 4

and 4P, I would be interested in somebody else's experience.

B. M. -Missoula, MT.

Q: I use my Microlabs board quite a bit and I would like to see reviews and tips. For instance, Bizgraph or Draw. I'd like a little better idea of how T-Cad works. Is it on a par or better than Draw? I'm into a PLD program and use some stats programs.

By the way, do you know where I can get a copy of LOGO (Mod III or 4) for my kids?

D. S. Knoxville, TN

A: Our next issue will carry a full review of the Microlabs board, which is presently in the works by the reviewer. -Ed.

Q: If I only want to print out a "forced" second page of a letter (using CTRL-N), the entire page scrolls before I get the prompt, "Do you wish to continue printing?" The printer should just print the page without all this nonsense. Is there a patch that will update Profile 4+ past 1987, I feel like I'm in a time warp every time I use it.

I have had some problems with SuperSCRIPSIT, but for the most part, it gets the job done. I also use Profile 4+ for my mailing list. It's much too slow when it comes to sorting, but again, it gets the job done and the letter quality of my DWP-210 is impressive.

Thank you for the newsletter. I found it quite interesting, since all the articles were in plain English and no one seemed impressed with their computer knowledge. I even got excited about your Classified section.

Yes, the Model 4 does have some staying power, in spite of its many short comings. I would never have my correspondence club or prining business without it.

I have also experienced the "swelling and shrinking" of my screen. R. S. fixed it when it was still under warrantee, but it has since started up again. I am not an electrician and, since it does not sound like a serious problem, I am not going to spend

any more money trying to patch it up.

I trust I will finally begin to get the answers I have been groping for these past three years.

G. M. -Hammond, IN

A: Your updating the Profile 4+ should be solved by using some of the approaches we covered in Vol 1 No. 1 and 2, using the LS-DOS 6.3 date conversion or with Michael Jacobs, up date program.

When you use the CTRL n command in SuperSCRIPSIT to force a page, you can only place the "forced page" at the beginning of a paragraph. If you do it will scroll the paper one full page forward, just as you describe. If you want to force a page in the middle of a paragraph, try this: go to end of the line above the line you want as the first line on the next page and use F1 and insert a paragraph symbol, this works great and I use it for letters all the time, until I forget and try to do it without, then I get a wasted page of fan fold, or the frustration of the printer spinning to remind me that I forgot again. -Ed.

Q: To the Open Forum,
Re: Superscripts and other Mysteries!

As a long time user of Radio Shack Model III's and then up to Model 4D's and 4P I have encountered my share of frustrations. Some of the problems I have learned to ignore and some I have solved, but none can be more perplexing than the problems I have encountered with SuperSCRIPSIT, (Yes, all versions!) I am a Computer user and I don't have the time or the patients to tinker with programs. I ask only that they do what they are supposed to do, and do it consistently.

Maybe someone out there has a solution to my problems with SS. I have found that when typing long documents that exceed 20K on the disk the program is very likely to screw up and insert "junk" in the document. By the time I get a program 50K in length I have found that storage room ("K's" required for the program grows much faster than in a smaller document. Another problem with a big document isn't a matter

of "if" it screws up, but "when" it screws up. Both my wife and I have large documents that require a lot of "editing". I have never, with any version of Scripsit, typed a large document just once and then went back and moved things around and made multiple inserts and deletions, without having problems. My wife's problems with this program are far worse than mine because of the nature of her hobby, Genealogy. She has several hundred long genealogy charts on SuperSCRIPSIT and they make extensive use of TAB LINES and TABS.

As a new material is researched the documents must be edited extensively. It is most always during the editing process that the program will "bomb". Sometimes going back to LS-DOS and sometimes it just "hangs up" and won't let you do anything and the document is lost. Is this program being fixed by Tandy? When will a "fix" from them be available? What are my alternatives? What about Scripsit Pro, does it treat tabs the same as SuperSCRIPSIT? I have looked into other word processors, but converting my wife's documents, with hundreds of tabs per document, would be damn near as bad to re-build as to retype.

I would also like information on a hard disk system. Because of the size of our data base and the number of large files I would require a 40 meg hard drive, but 70 meg would be better to allow for expansion. I must also have a reliable method of backing that much information up. Possibly a tape drive. Since I run two 4D's side by side I would want both of them to access the hard drive in either LS-DOS or CP/M. I don't have a clue where to to start asking. Certainly in northern British Columbia I can't find anyone with the knowledge required. I don't even know if what I want is possible. Model 4's have been discontinued for some time in Canada and the dealers are of little help.

One last problem. I purchased the Profile III+ Upgrade to Profile 4 Plus. The program is excellent, but the documentation that came with the Profile programs is terrible. Is there anyone who writes a common sense, plain English explanation of how to use Profile 4 Plus?

I realize this is a long letter, but this is a big problem. I do hope that there is some relief in the offing. Many's the day I have been tempted to fire computers and all out the window. That might solve the problem but it would not be a solution.

S.W.O. -Prince George, B.C. Canada

A: We published this rather long but very interesting letter because it covered so many of the problems that others have been writing about.

First off, your problems with SuperSCRIPSIT are very much the same as we have had with our own publication, and the problem seems to stem from long documents with a lot of tabs and a lot of editing, see our Vol 1 No 1 and 2, which covers much of these problems. Our best results were from not using the latest edition (ver 1.2) that was supposed to cure many of the problems that were in (ver 1.1) and return to the 1.1 version updated with LS-DOS 6.3 date conversions. Our weekly publications are very much like your wife's data, with a lot of single word, and single line editing, deletes and re-entries, around a number of TAB lines. The advantage of SS's "what you see is what you get" in this type of work is what keeps us using the program. For other word processing applications we do use other programs that are not disk based, but are memory based when building documents.

Is Tandy working on the problem? We doubt it. We sent the complete set of our disks, data and hard copies of the problem we were having last year to RS support center in Fort Worth, and with their withdrawal of Model 4's from the market place, I doubt that they are going to spend any more time on the TRS-80 version.

Some of the suggestions that come to mind, rather than repeat them all are; purge your MOVE/CTL file often from drive zero, as this has a tendency to grow, as you delete, move and copy a lot. And as you know if you convert to ASCII and then convert back again to a new document file you loose all your tab setting and have to redo them, try that only if you have frozen paragraphs that you can't un-freeze, sometimes it works and sometimes it doesn't.

Some people who are using SS for other types of applications have very few problems, but those who use it with a lot of tabs, a lot of small item editing, or single line and short paragraph moves, seem to be reporting the same problems. And of course if you do this type of form reconstruction work you have to be able to see the text on the screen as it would be printed out and still be able to edit the text at the same time.

David Goben has been working on this problem also, for a year, and can not seem to come up with the answer either. But we, like you want the program to do what it is supposed to do, and we are determined to keep on trying.

We would like to hear from users of Scripsit Pro, we understand that the program operates under a different internal directory system than the SS, but retains much of the same style and commands as SS.

To your question on hard drives, the size of the drive is relative to the users file needs, some find a 5 meg will fill their needs, and others will need a much larger drive.

At one time there was a unit called a Multiplexer that would connect one hard drive to two computers and work like an automatic switch between the two, this was marketed by Micro Smart, formerly Software Support, and checking with them by phone they no longer have multiplexers and the cartridge hard drives for the TRS-80 computers.

We use a five meg Konan cartridge hard drive, which uses cartridges by SyQuest Technologies, for the reason that you mention, having the hard drive available to operate on two different DOS systems, so we do not have to download the data, and reformat to switch to the other other DOS system. (We just found out that the drive is no longer supported by either MicroSmart or by Konan.) The option here is to partition the hard drive to use LS-DOS for half the drive and CP/M on the the other half, this may increase the size of the drive that you would need. And a quick check with Konan Corp. tells us that those drives and cartridges are no longer available.

Your best bet is to contact Aerocomp for any hard drives, they will at least work with you on your needs and selection. And hopefully be around to provide service in the future.

As far as we know the backup to floppy disks are just as reliable as the tape backup systems, it just takes longer, as some tape back up systems back the drive up at the same time as you enter the data. And of course disk drives are a lot less expensive hardware.

One suggestion we like, but sometimes fail to heed is to make two backups of everything at the end of each day, rotating the set each day, ie. make one on Monday, and make one on Tuesday, then on Wednesday use Mondays disks to make your back up, and so on. That way you don't run the risk of losing more than one days work if something goes wrong during the backup. Nice thought isn't it -what could go wrong- and lose only a day! (Eight hours of solid production). Well I guess if you are going to live in the modern world and play with its toys you have to take the risks, but let's not dwell on that thought, I would rather delude myself and think that everything is going to work perfectly every time. Is that too much to ask from our modern technology. (I've been using the same toaster every morning for the past 20 years!)

We will let fly your query on Profile III Plus, at our readers, I am sure there are some more qualified users of the program than we are, who could answer some of your questions about a better manual. If we knew more about how you were using it, some home grown instructions could be forthcoming.

We use our Model 4's anywhere from 40 to sometimes 60 hours a week, and most of that time is spent creating documents with SuperSCRIPSIT, it is the best for some things and the worst for others.

Q: I really enjoyed reading your latest issue, Vol 1. #5. Each issue seems to be getting bigger and better all the time!!! On page 3 of the latest issue you asked for stories on installing internal hard drives. We here at Chicago Syslink Network have gone

one better. We've been able to set-up a system using 2 Model 4's and one Model 4P all hooked up to an external 20 Meg. hard drive and all running at the same time, accessing the same files. We're also using NEWDOS/2.5 as our main operating system. This may sound like too far fetched, but it is true. Having run a BBS now for almost 7 years, we outgrew the capacity for floppies, even 80 track double density/double sided. We had up to four running on one machine. In the early part of 1987, we saw an ad in 80 Micro for something called the 'Megaplexer' and 'Megadisk' from Micro Smart Inc. in Ashland, MA. If you have an old issue of 80 Micro, take a look on page 41 of the June 87 issue. We bought the 4 port version and the 20 meg. hard drive. We paid \$200 for the megaplexer and \$500 for the hard drive. After hooking up all the cables and following the instructions, we were able to have all THREE computers reading & writing to the same hard drive using NEWDOS80/2.5

For the past year or so, everything went fine. Then last weekend, right after backup, we had a hard drive failure. Thank God for backups!!! We were able to replace the hard drive with a new Seagate ST238 30 megabyte, but were only able to use 20 megabytes due to the disk controller. At least we got a good deal on the new drive, \$280. The problem we're facing is that the company, MicroSmart, no longer sells - nor supports this hardware. They won't even supply schematics so we can fix it ourselves in case it goes. Has anyone else out there purchased this type of hardware before or knows where we can find the person who built and designed the 'Megaplexer'??? We don't want to move to MS/DOS or another BBS software package because we haven't found anything this good in the IBM/MS-DOS world. We also heard that there's a company, HYPERSOFT, we think, that will simulate a model 4 world on an IBM/Clone. Is this true? Anyway, having used NEWDOS80 exclusively for the last 8 years, we're more than willing to swap/share information. If you have a modem, call us directly at 312/622-4442, 300/1200/2400 baud or feel free to call the voice number 312/622-5969 evenings before 9PM central time or even write us attn: George Matyaszek
Chicago Syslink Network - 1718 North Long Ave., Chicago, IL 60639-4321

A: Sure wish we could come to your rescue George, but we just found out that MicroSmart would not talk to us about the hard drives we purchased from them, one in 86, and one in 87. Hypersoft is the company you are thinking of, see their ad in our Vol 1 No 4, or call Mike Gingell, at 919-847-4779, the program is called PC-Four but it only emulates the Model 4 Mode and it supports a hard drive on the PC. It does not emulate Model III programs but Mike tells us he is working on one that will.-Ed.

Q: Can anyone tell me how to do a global search for any of the various end-of-paragraph signs that may turn up in Scripsit Pro?
A. H. R. Geneva, NY

Q: We have been looking for 5-1/2 x 11 or longer, without perfs, plain white fan fold paper, similar to that used by newspapers or press services and we have been unable to find a source. Would anyone know where this paper might be available?
P.R.-Duquette, MN

Q: Can you provide some information on the use of the Video SVC? As I've done for my Model 3, I'd like to write a memory resident /CMD file to allow some specific ASCII characters to be sent to the Video by assigning certain key combinations to each character (E.G. Shift plus A, send [left bracket. This will allow sending these characters from within application programs.
A. P. -Pittsburg, CA

A: We have been publishing quite a bit on this subject see Klaus Meinssen's article on ASCII characters in Multiplan in Vol 1 No 5 page 6, and Jane A. Layman's article on page 20 of the same issue. We are waiting to hear from others too. From our records we assume that you are now wanting to do the same thing on your Model 4, 128K LS-DOS 6.3, as you did on your Model III that you mention in your question.

I have been using a III since they first came out. I started with a Model I. It was matches with an Epson MX-80. I have added

a 4P with custom double sided drives matched with an Okadata 82. I use SuperSCRIPSIT, Super Visicalc and Profile Plus. They handle everything I need presently. I am looking for more educational business, and game programs. My next machine purchase will operate an architectural CAD package with high speed plotter. B.J. S. Architect - Columbus, OH

I got into the SHell Ver 1.5, 1.6 & 1.8 disk managers for the Model 4, via Public Domain, Registered with the developer and since got his ver 2.0 (non-PD) up grade.

It can manage disks far easier than any disk manager I've acquired in MS-DOS (PC-Tools, Xtree, etc.) No model 4 owner should be without it. Another program great is T&K, (a TRS-DOS survival kit) easier to use than Super Utility 4 and almost as complete. I am in a "hackers" group for the Model 4, some of the guys can do anything, I'll even do my MS-DOS and and I learn from them.

I have a model III, 4P with 75 disks each -PD. If I can help anyone, I'd be glad to compile a list and make them available. I got heavy into the PD libraries before they closed up.
B. M. - Marne, MI

Thanks B. M. we need all the help we can get, and would like to have your list of PD's. -Ed.

We are very glad to see someone still cares about TRS-80 computers. We have a lot of TRS-80 owners in the area who need help. We try to support them as much as possible and will let them know about your magazine/newsletter.
B. B. Westfield, IL

Thanks for the help and the recommendations. -Ed.

I would like to have a file system that does not keep going out to the disk drive for every record, and also a simple name or letter sort in basic.
D. Z. - Maumee, OH

Does any of you PD collectors have a suggestion, for D. Z.? -Ed.

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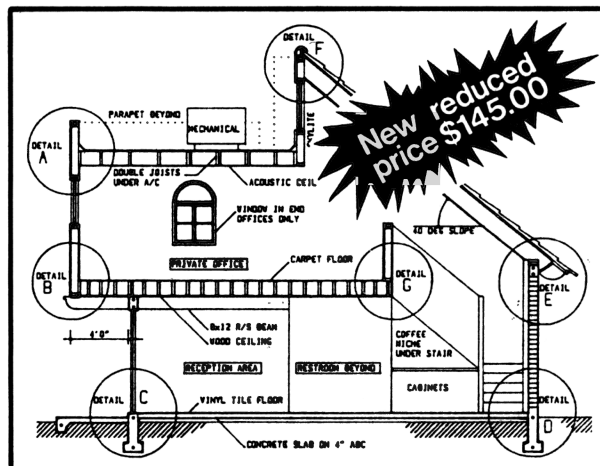
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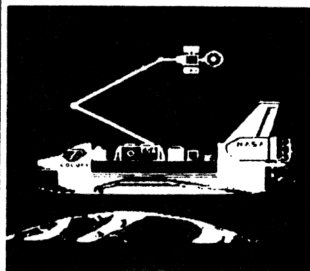


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By moving to CP/M on your Model 4 you achieve two things. First you open the door to a wealth of existing software. More 8-bit software runs under CP/M than any other operating system. This includes virtually all of the "big name" programs which have set the standards by which all others are measured. Programs like **WordStar**, **dBASE II**, and **Turbo Pascal** are available for CP/M, but not TRSDOS. Public domain software, almost unknown under TRSDOS, fills hundreds of megabytes of disk space. Valuable public domain programs like the **Small C Compiler** are just a toll-free phone call away. Most importantly, hundreds of applications programs are available from a multitude of vendors. Many include the source code. Wouldn't you like to be able to choose from scores of Accounts Receivable or General Ledger programs, instead of the meager selection you now have?

What about the future?

When the time comes to move up to another computer it will almost certainly use MS-DOS. That's when CP/M users get a pleasant surprise. Since MS-DOS was a derivative of CP/M it operates in almost the same manner. Even better, most of the same software packages are available in 16-bit form and they operate in virtually the same way that they did under CP/M.

Is it easy to use?

Montezuma Micro's CP/M has been carefully crafted to present a maximum of features while taking a minimum of memory. It supports all of the standard features of the Model 4/4P/4D computers, as well as most of the optional ones. Our CP/M has been consistently been awarded the highest ratings in industry magazines. It is version 2.2, the most popular and reliable of all the versions of CP/M produced. Our CP/M has been made as easy to use as possible. All customer-selected features are chosen from simple menus in our CONFIG utility. This includes the ability to configure a disk drive to run like that of scores of other CP/M computers for maximum ease of software portability. Using the unique DBLCROSS program in our Monte's Toolkit utility pack-

age you can move files back and forth between CP/M, TRSDOS (1.3 and 6.x) and MS-DOS.

Why use Montezuma CP/M?

We have already told you why our CP/M is the best for the Radio Shack Model 4-computer. The only question left to answer is "Why buy CP/M at all?" Radio Shack has abandoned TRSDOS — all of their new machines use MS-DOS. Most of the software producers have followed, leaving no new software development and saddling the TRSDOS user with whatever software "left-overs" he can find. Which DOS do you want to head into the future with: the one originally written for the Model I or the one that served as the basis for MS-DOS? Make the right choice right now for just \$169.

If I need support?

We don't forget you after the sale. If you have a problem you will find our phones are answered by people, not answering machines or hold buttons. Our philosophy is very simple — we want you to be happy and satisfied with your purchase. If you have a problem then we have a problem, and we'll do whatever we can to resolve it.

Cost to update?

Our owners are protected against instant obsolescence by our lifetime upgrade policy. At any time you can return your original CP/M disk to be upgraded to the latest version free of charge, except for a small shipping and handling fee. Periodically we publish NEW STUFF, a newsletter for registered users of Montezuma Micro CP/M. This publication carries news about new products, tips for getting more out of CP/M, and other valuable information for our users. It is sent free of charge to registered owners.

Can I use a hard disk drive?

CP/M hard disk drivers are available for Radio Shack, Aerocomp, and most other popular brands of hard disk drives. These drivers allow the hard drive to be partitioned into one to four logical drives of varying sizes.

These drives may all be used by CP/M, or may be divided between CP/M and TRSDOS. A head-parking utility is included on the driver disk to minimize the risk of damage when the hard disk drive is not in use. Also included at no charge is a utility which will copy, compress, list, print, and delete files with ease. There isn't much you can say about a driver. It either works or it doesn't. Ours works supremely and it only costs \$30.

Hard disk backup?

Unlike the high-priced, underpowered backup utilities available for backup of TRSDOS hard drives, our CP/M **HARDBACK** utility makes the backup of a hard disk to floppies quick and painless. Only **HARDBACK** gives you the choice of backing up the entire drive or only those files which it knows have been changed since the last backup. Daily backup is no longer a chore, since only new data must be copied. With **HARDBACK** you can quickly restore an entire drive, or only a single file if necessary. Only **HARDBACK** will perform a complete check of the hard disk drive and lock out tracks which have become flawed to prevent the use of those tracks for later data storage. Add this supreme program to your hard disk for just \$49. Isn't your time and data worth it?

Specs?

Size of Transient Program Area (TPA): 56,070 bytes in a 64k system. 55,046 bytes in a 63k system (with optional hard disk driver). **CP/M IOBYTE:** Fully implemented. **Device Drivers:** Disk (35, 40, 77, & 80 track, single/double density single/double sided, 3, 5, or 8 inch. (More than 85 disk formats supported)) **Maximum Disk Capacity:** 40T SS=220k, 40T DS=440k, 80T DS=880k **RS-232:** All word lengths, parity, & baud rates. **Parallel Printer:** With or without line-feed and/or formfeed. **Video:** 24 by 80 with reverse video. **Keyboard:** Full ASCII with 9 function keys. **RAM Disk:** 64k, automatic on 128k systems. **Hard Disk:** Optional drivers available at extra cost for most popular models. Standard CP/M programs included: **ASM, DDT, DUMP, ED, LOAD, MOVCPM, PIP, STAT, SUBMIT, SYSGEN, and XSUB.**

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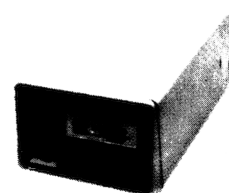
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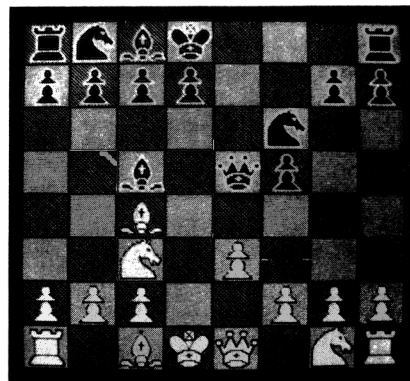
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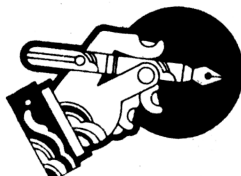
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